

# Performance Evaluation of Electricity Service Delivery Privatisation in Selected Developed and Developing Countries

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**Abstract:**-Electricity service delivery privatisation had been the strategy embarked upon in some developed and developing nations with the intention of finding a solution to the problem of poor supply of electricity. The comparative analysis of the factors that account for either poor or excellent performance of this strategy in some selected countries across the globe is the thrust of the paper. Relevant literature was systematically reviewed to unravel the factors responsible for poor or excellence performance as method adopted in this paper. Seventeen nations were purposively selected across the globe and the comparative analysis of the factors for effective service delivery of electricity in some nations and otherwise in some other nations. The analytical results of the factors like; availability of enabling environment of functional electric facilities, the effective distribution network of electricity facilities, and cautious privatisation planning process by the government that have utmost concern and consideration for electricity users among others, formed the points of the discourse of the study. Recommendations like; availability of functional electricity service delivery facilities, preparedness of the government, appropriate planning process, inter alia, before venturing into privatisation, were the submission of the paper.

**Keywords:** Electricity service delivery, enabling environment, privatisation planning process, performance, Selected Countries.

## I. INTRODUCTION

Public utilities and infrastructures provision particularly (power) electricity supply has been a critical issue for the public sector (Government) in many nations most especially in the developing nations of Sub-Saharan Africa. Many reasons have been attributed to this among which are; incessant power failure, lack of spatial planning in the service delivery of electricity, inadequate investment by the government into the power industry, technicians ineffective operation, administration and managerial flaws, among others. However, the adoption of privatisation strategy at finding a solution to foregoing challenges had been embarked upon by different nations of the world. This move was an effort towards free enterprise and increased inclusive private sector participation in the power sector as against hitherto government participation and ownership control over the sector.

Privatisation is adopted by nations of the world for different reasons and objectives that best suit their economic

situation (Essays, UK. 2013). Privatisation is defined as the contract with the private sector engaging them in the production and provision of the good and services that were previously fully provided by the government. It is generally referred to as the transferring of the public responsibility of providing certain public services to a private body or organisation, that is, the removal of State control of ownership of public enterprises (“In-the-Public-Interest” 2015; Investopedia 2015 and Sepehr, 2013;). Privatisation could be in different methods and scope.

The methods of Privatisation approaches, generally involve among others, are; Asset sale or trading-off of state-owned enterprises to private body, public-private partnerships, franchise, contracting or saddling a private businessman with the responsibility of providing a certain service; giving vouchers to the users of service publicly provided in order to pay for cost recovery; or provision of grants and subsidized ticket for affordability of the low-income earners to cope with the privately provided good and services (Sepehr; 2013 and Oyebanji, 2010.).

## Problem Statement

Privatisation approach to electricity service delivery has been found effective in some nations of the world. However, in relation to electricity service delivery despite privatisation, it is observed that the delivery of this aspect of public utilities remains poor, with significant power (electricity service delivery) failure hindering economic development just as in Nigeria (Pavanelli, 2015). The foregoing formed the study’s problem statement.

## Objective

The paper’s objective is to identify the influence of electric facilities like; transformer, electric poles, wire and cable and their distribution network as fundamental to the effective performance of electricity service delivery in the selected nations based on the extant literature reviewed.

## II. LITERATURE REVIEW

Nightingale & Pindus, (1997) said that there is no particular meaning for privatization because it has a wide range of coverage in models and methods. Definitively,

privatization is the contract with the private sector engaging them in the production and provision of the good and services that were hitherto exclusively provided by the government. It can involve among others, these four dimensions as; trading-off of State-owned enterprises to private body; saddling a private businessman with the responsibility of providing a certain service; making the users of service publicly provided to pay for cost recovery; or provision of subsidized ticket for affordability of the low-income earners to cope with the privately provided good and services (“In-the-Public-Interest” 2015; Investopedia 2015; Sepehr, 2013; England, 2011; Oyebanji, 2010; Robert, 2008).

#### *Theoretical Framework*

The study found its fundamental theoretical background from among the ‘Theories of planning’ and ‘Theories for planning’. The theory of rational principle is found in the domain of the ‘Theories of planning’. This principle regards the planning environment as a unique entity which requires identification, analysis and rational decision approach to tackling the problem completely and finally. This is the principle behind having a unique identity of the problematic area like the; neighbourhood plan in particular or Master plan in general.

Based on the issue in discourse, the ‘Theories for planning’ became relevant in this study. The theories for planning are more of theories underscoring Aspatial planning. Aspatial planning, Olamide *et al* (2017) averred that ‘*a roundtable paperwork process of planning is Aspatial planning approach*’. ‘*The end product of this is a policy statement that provides a set of guiding principles to help with decision making, just as the privatisation policy of electricity service delivery in Nigeria*’ (Olamide *et al* 2017). It is based on adherence to the tenets of these theories this paper found its locus standi in addressing the issue in discourse

#### *Concept of privatisation*

The concept of privatisation is averred as an economic-policy by propagation of Europe and America intending to collapse the whole world economic activities and framework into a globalized community (Sepehr, 2013). Both the advanced and developing had made use of privatisation approach in some area of their public service delivery (Kosar 2006; Gilroy, 2010; Salimi *et al*, 2012; Sepehr, 2013; Hussain, 2014). As such; the world economic network, therefore, has now become widely coordinated in its viewpoint with almost free entry and exit in business sector development, nearly unrestricted, with improved better transport networks and communications, making economic opportunities and activities both at the neighbourhood local level, national/regional/international to worldwide more synchronized, (Kande, 2005). It was the course of this that gave impetus to all others for a reorientation of their economic drive purposely for achieving better institutional development in the comity of nations (Kelegama, 1995 cited in Sepehr, 2013).

From the above, privatisation policy as an approach to liberalising the economy has led to each nation’s reorganisation, coordination and reorientation of hers economic, socio-cultural and political welfares in emulation of other nation-states of the world. To this end, privatisation has since expressed concern with setting reference points for Africa and other developing nations in the adoption of the new monetary policy. In this regard, privatisation is being forced on the developing nation-states as a way out of economic depression and wretchedness. The issue of privatisation policy on public utility without ensuring adequate spatial information database of the enterprise and its implications is the thrust of this paper. This implication on public social well-being and concern for the interest of the nation’s citizenry in light of the investors’ profit-driven mindedness was also the agitations of Etieyibo, (2011) and Wogu, (2007).

Hence, it is acclaimed a widespread failure in many developing nations (Pavanelli, 2015). Additionally, privatisation policy in Africa, in comparison with those in the developed countries of the England, Germany, USA, Canada, among others in that line has recorded a low-level performance because of absence of transparency, lack of political will, corruption and deficiency in policy implementation on a high level (Peterside and Brown, 2014 and McKenzie and Mookherjee, 2002). Where above ills abound would never allow the proper plan to be on the ground before venturing into privatisation. This paper objectively explained the various factors that account for effective electricity service delivery in the selected countries and identified issues and challenges of power reform in the selected countries with the aim of highlighting the similarities and differences between them.

#### *Study gap*

This study’s discovered gap is that of non-adherence to fundamental issues before venturing into the adoption of privatisation, occasioned by non-consideration for adequate database spatial information about the condition of the physical infrastructure (electric facilities) of this public utility ahead of the introduction of privatisation policy. Above non-consideration of the condition of the physical infrastructure (electric facilities), forms the gap of this study from the literature in the study on performance evaluation of privatisation in the global south as a whole and with particular emphasis on Nigeria.

Gathered from the existing literatures such as, (Hussain, 2014; Flynn and Asquer, 2013; Michael, 2005 in Super 2013; Sepehr, 2013; Salimi *et al*, 2012; Leech, 2011; Gilroy, 2010; Kosar 2006), privatisation of public utilities, such as; water supply, railway transport service, telecommunication service, and educational services, among others assumed a successful dimension in developed countries such as; in Europe and in America, similarly, electricity reform in Bolivia and Nicaragua because of transparency,

(Rufin, 2000). However, in the case of African privatisation, the process has failed, as rightly observed (In-the-Public-Interest 2015 and Colin, 2010). While a country like Britain is subsidising the cost of railway after privatisation and the EU nations were doing everything possible to reduce internet cost and call charges, the opposite is the case generally in Africa and particularly in Nigeria. This forms the premise of the study on comparative analysis of the factors that account for either poor or excellent performance in some selected countries across the globe.

### III. METHODOLOGY

Methodologically, the study's information was literature based and the nations were purposively selected based on the issue in discourse. They were also proportionately chosen to have a representation of both developed and developing nations across the globe. Hence in this study, 17 countries were purposively selected across the globe, based on homogeneous of available spatial information according to (Account learning, 2016 and Ilker, et al., 2016) and in consonance with Grounded theory (Glaser and Strauss, 1967, pp. 161-184 in Corbin and Strauss, 1990). The countries were Canada, The United States of America, Mexico, Chile and Argentina, (5 nations from North, Latin and South America). From the European countries, the United Kingdoms, France, Germany and Italy were considered. Pakistan, India, China and Malaysia were discussed under Asian countries while Morocco, Cameroon, Ethiopia and South Africa were selected in Africa.

#### *Selected countries across the globe*

The paper is interested in the initial consideration of electrical facilities distribution network and their functional condition as fundamental to successful privatisation and eventual effective electricity service delivery. The paper hence stressed the need for availability of adequate spatial information database of these facilities' spatial relationship in connection with the customers would form an enabling background for better performance of electricity service delivery privatisation as supported by (Investopedia, 2015 and England, 2011). The experience of some selected countries that had privatised their electricity, looking at how the availability of spatial information database of the electric facilities' distribution network and functional condition before and after privatisation is influential to the performance of their quality electricity service delivery formed the base for the comparative analysis. These selected countries were each discussed below based on their pre and post experience of electricity service delivery privatisation.

The selected countries in the context of this research were from (The North, Latin and South America). To start with, **Canada** with enabling environment, (Humphrys, and James-Abra 2015) and a unique cautiousness of the government privatisation planning process is of the belief that, privatisation efficiency is not a matter of ownership alone. Hence, there was a consideration for the influence of electric

facilities' functional condition and distribution network in the case of electricity privatisation to achieve the potential benefits of the privatisation policy, (Gent, 2016 and Levac, and Wooldridge, 1997). The case of successful privatisation of the rest developed nations selected and considered; were similar. The **United States of America**, according to (Iskhakov, 2013; U.S. Energy Spatial data Administration, 2016; Foster, 2016 and Demarco, 2016), and **Mexico**, (Principales results in de la Encuesta Intercensal 2015 Conde, 2010 and Enrique, 2016), were similar to Canada in this respect. In the case of **Chile**; there was a lack of investment in electric utilities, when it was then under public ownership, (Larrain, and Meller, 1991), but worldly acclaimed most successful comprehensive electricity sector privatisation, (IAEA, 2013 and Pollitt, 2004). And in **Argentina**, there was already electricity coverage (Bonfanti, 2016; Gale, 2007) to facilitate the eventual electricity service delivery privatisation.

The European countries, considered were; firstly, the **United Kingdom** with several investments in the electric facilities network before privatisation brought benefits to the customers, better condition for business process, and elimination of inefficient procedures if under public control, and finally consolidating UK's economy (Rotaru, 2013). Secondly, **France**, the electricity service delivery privatisation experience was successful, (Wollmann, 2012 Eurelectric Paper, 2013). Thirdly, **Germany** was also successful in the privatisation of electricity service delivery (Wollmann, 2012 Eurelectric Paper, 2013). And finally, **Italy** success in the case of electricity service delivery was due to organised electric facilities' distribution network, Italy is said to be among the European countries with the high performance of electricity service delivery, (An EURELECTRIC Paper, 2013). There were records of successful privatisation of electricity service delivery in all the European countries considered. The success was based on the three issues under consideration in the context of this research. These are the enabling environment of functional electric facilities and distribution network, cautious privatisation planning process by the government and consideration for users.

Despite diverse electricity distribution business across Europe, European distribution system operators (DSOs) generally provide a very high level of reliability and quality of supply to their customers. Notwithstanding, great effort at investing further in distribution networks, with the introduction of more database tools, such as; smart grids and smart meters, are still being proposed to accommodate their challenges and the replacement of the current ageing electric facilities while maintaining the high electricity service delivery quality. In Europe, the distribution companies (DSOs) is saddled as system operators who ensure a reliable flow of electricity through their network to their customers and also continually develop and maintain electric facilities' networks under their coverage to ensure efficient operation of the networks with high levels performance of system security, reliability and quality. (A Eurelectric Paper, 2013)

Among the African countries selected is Morocco. **Morocco** partial privatisation was encouraged by the World Bank and electric facilities were considered an enhancer of effective electricity service delivery to the public (Hatem, 2007). Prior to privatisation, bad electric facilities replaced, installed ones energised. There were expansion and connections to the electricity network and systematic use of spatial data for quality service delivery, (ONEE-Branche Electricité, Rapport d'activités 2012, 2013 and Amegroud, 2015). Next country considered was Cameroon which has records of poor electric facilities (IMF, 2014), and the consequent poor electricity service delivery has been the contentious issues in the country leading to public protest at times (IRIN News, 2015; Pineau, 2004).

**Ethiopia** privatisation became needed due to expansion at the recommendation of (World Bank, 2016), consistent with this research, the need for spatial data was considered in relation to electric facilities network and customers. And finally in South Africa, before privatisation, cases of power outage were due to overstretching of the existing facilities, (Hertzmark, 2012). However, as the electricity demand increases and to have successful privatisation, part of the issues considered was electric facilities' distribution network to ensure its functional condition for operative, viable and reliable electricity service delivery under privatisation, (Post Graduate, 2013; Government Gazette, 2008 and Eberhard, 2007).

In Asian countries, Pakistan, India, China and Malaysia were discussed. **Pakistan** power outage was such a challenging one before privatisation, (Yoo and Kwak, 2010; Yoo and Joo-SukLee, 2010; Yoo, 2006; Morimoto and Hope, 2004). There were problems of electricity distribution network, inadequate quality electric facilities networks, ageing and deteriorated electric infrastructure system condition, (Ukessays, 2015; Luisa et al, 2010; Auriol and Blanc, 2009). Even in privatisation, it was a failure, until, the recommendation of spatial data of electric facilities especially in Karachi city, (Nawaz-ul-Huda, et al 2012).

In **China**, there was a lack of foreign investment before privatisation and after privatisation; wasteful investment in the country's electric facilities' networks as a result of insufficient research and assets evaluation also hampered quality electricity service delivery, (OECD/IEA, 2006). In **India**, power outage resulted from the collapse of electric facilities that would require a huge investment for improvement and performance (Jayasekera, 2012). Srijan, (2009; 2011) observed the privatisation planning as a failure due to some issues which this research considered as a consequence of poor privatisation planning process. Finally, in this category in **Malaysia**, there was adequate preparation before privatisation, (Zamin, et. al. 2013), as such after privatisation there was no itch as to reliable electricity service delivery to the customers. Taken into consideration the initial enabling environment of adequately planned electric facilities with spatial data in relation to the users, a review of electricity

service delivery privatisation success or failure was embarked upon by this research in some selected countries across the globe.

IV. TABULAR COMPARATIVE ANALYSIS

Table 1.1 Summary of selected countries' on enabling an environment for privatization

The condition of Electric Facilities' Distribution Network and performance				
Country	B/ privatisation	A/ privatisation	Success/ Failure	Availability of spatial data B/P
	Electric Facilities' Functional & Distribution condition			
Canada	Already Planned	Adequate	Successful	Yes
US	Already Planned	Adequate	Successful	Yes
Mexico	Already Planned	Adequate	Successful	Yes
Chile	Unplanned yet	Adequate	Successful	Yes
Argentina	Already Planned	Adequate	Successful	Yes
<b>Selected European Countries</b>				
U.K	Already Planned	Adequate	Successful	Yes
France	Already Planned	Adequate	Successful	Yes
Germany	Already Planned	Adequate	Successful	Yes
Italy	Already Planned	Adequate	Successful	Yes
<b>Selected Asian Countries</b>				
Pakistan	Poorly Planned	Inadequate	Failure	Later Recommended
India	Poorly Planned	Inadequate	Failure	Not Fully Introduced
China	Poorly Planned	Inadequate	Failure	Not Fully Introduced
Malaysia	Already Planned	Adequate	Successful	Yes
<b>Selected African Countries</b>				
Morocco	Poorly Planned	Still in Progress	Towards Success	Later Recommended
Cameroon	Poorly Planned	Inadequate	Failure	Not Fully Introduced
S A	Already Planned	Adequate	Successful	Yes
Ethiopia	Poorly Planned	Still in Progress	Towards Success	Later Recommended

A/privatisation = After privatisation  
 B/privatisation = Before privatisation  
 A/P = After privatization

V. CONCLUSION

Generally, the literature averred that resounding success, enduring benefits and sustainable privatisation hinges on its appropriate organised planning process, (Luqmani, 2016; Makwe, 2012 Shirley 1992). The privatisation of electricity service delivery was successful in those selected nations due to the availability of enabling environment of functional

electric facilities, the effective distribution network of electricity facilities, and cautious privatisation planning process by the government that have utmost concern and consideration for electricity users.

## VI. RECOMMENDATIONS

The paper has emphasized the issues of .privatization policy to electricity supply and the issues and challenges related to the practices of the approach from the operations of the selected countries. The study observed that privatization policy itself is neither good nor bad and recommended that; enabling condition of the environment where it is been adopted like in Nigeria must be considered. The political disposition must be determined. The government tenacity of purpose to rightly achieve its aims and objectives must be of paramount focus. The implementation procedures that are primary to the success of the policy must be tenaciously pursued just like the case of those countries where it was successful.

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